

# Tulsa Law Review

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Volume 28  
Issue 3 *Mineral Law Symposium*

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Spring 1993

## The Mixture and Derived-From Rules under RCRA: Is There Life After Shell Oil

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### Recommended Citation

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## THE MIXTURE AND DERIVED-FROM RULES UNDER RCRA: IS THERE LIFE AFTER *SHELL OIL?*

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"The Solution to Pollution is Dilution."

Anonymous

## I. INTRODUCTION

In 1976 Congress responded to growing concern for the environment by passing the Resource, Conservation and Recovery Act (RCRA).<sup>1</sup> RCRA's purpose was to "protect public health and the environment."<sup>2</sup> To further that purpose, the Environmental Protection Agency (EPA), charged with administering RCRA, set out to regulate hazardous waste so that it would be tracked from its point of origination to its final resting place.<sup>3</sup> This concept is known as a "cradle to grave" regulatory scheme.<sup>4</sup>

Under RCRA, the EPA is authorized to impose certain obligations on facilities that generate, treat, store and dispose of solid wastes which meet the EPA definition of "hazardous."<sup>5</sup> Because this definition can be ambiguous, facilities which handle solid waste have experienced difficulty interpreting RCRA requirements.<sup>6</sup> Misinterpretation of these requirements can cause facilities to face stiff penalties or even prison terms for their chief officers.<sup>7</sup>

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1. Pub. L. No. 94-580, 90 Stat. 2795 (1976) (codified as amended at 42 U.S.C. §§ 6901-6992k (1988)). RCRA was amended in 1984 by the Hazardous and Solid Waste Amendments, Pub. L. No. 98-616, 98 Stat. 3221 (1984). See William L. Rosbe & Robert L. Gulley, *The Hazardous and Solid Waste Amendments of 1984: A Dramatic Overhaul of the Way America Manages Its Hazardous Wastes*, 14 *Envtl. L. Rep. (Envtl. L. Inst.)* 10,458, 10,459 (Dec. 1984).

2. 43 *Fed. Reg.* 58,947 (1978).

3. *Id.* See James P. O'Brien, *Outline of Portions of RCRA—The Resource Conservation and Recovery Act of 1976*, *ENVTL. L. UPDATE*, Sept.-Oct. 1992 for an excellent synopsis of the requirements generators of hazardous waste must follow under RCRA.

4. 43 *Fed. Reg.* 58,947 (1978).

5. 42 U.S.C. §§ 6901-6992k (1988).

6. James C. Morris, III & Cheryl L. Coon, *Who's on First, What's on Second, or a Discussion of the Scope and Potential Misuse of the 'Mixture' and 'Derived-From' Rules and 'Contained-In' Policy*, 44 *Sw. L.J.* 1531 (1991). RCRA also provides that any facility which treats, stores or disposes of a listed or characteristically hazardous waste must first obtain a RCRA permit. 42 U.S.C. §§ 270.1, 6925(a) (1988). The EPA originally estimated that issuance of permits would take up to five years to complete. It authorized the issuance of interim status permits to existing facilities to cover the period during which the program was being implemented. Facilities were only subject to limited requirements during this period. The Agency estimated that approximately 270,000 waste generating facilities and 10,000 transporters would be regulated, although only about 30,000 would require treatment, storage or disposal permits. 43 *Fed. Reg.* 58,946-47 (1978).

7. Civil Penalties under § 3008 of RCRA are set out in 42 U.S.C. § 6928(g) (1988). Under that section "any person who violates any requirement of this subtitle [RCRA] shall be liable to the United States for a civil penalty in an amount not to exceed \$25,000 for each such violation. Each day of such violation shall, for purposes of this subsection, constitute a separate violation." *Id.*

Criminal penalties are much more harsh. Liability under § 3008(d) hinges on the extent of the actor's knowledge that his conduct constituted a crime. Where there is knowledge, a defendant could be fined \$50,000 per day or more or imprisoned for a time not to exceed two years (five years if the defendant knowingly transported or knowingly treated, stored or disposed of any hazardous

In 1980 the EPA promulgated the "mixture" and "derived-from" rules, which helped to clarify the definition of hazardous waste. These rules have caused substantial problems over the past decade, but courts have been reluctant to address such problems and have deferred to the expertise of the EPA. In 1991, the U.S. Court of Appeals for the District of Columbia opened a "can of worms" by invalidating the rules on procedural grounds in *Shell Oil v. Environmental Protection Agency*,<sup>8</sup> and an extensive review of the rules has begun.<sup>9</sup> After a much criticized first attempt at a proposed alternative,<sup>10</sup> Congress intervened, reinstating the original rules until such time as the EPA has effectuated revisions to the rules.<sup>11</sup>

The EPA, an established powerhouse among government agencies, has received criticism from all sides since the *Shell Oil* decision. In attempting to appease all interests, the EPA has endured political whiplash as well.<sup>12</sup> With the current change in political power may come a

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waste) or both for a *first* offense. *Id.* If there is a subsequent offense, the fine and/or imprisonment "shall" be doubled. *Id.* For "knowing endangerment" of another person, the perpetrator will be subject to fines of not more than \$250,000 or imprisonment for not more than 15 years, or both. *Id.* A defendant that is an organization could be fined up to \$1,000,000. *Id.* The "knowledge" element has been interpreted differently by the Supreme Court depending on the extent of the actor's knowledge and whether the conduct involves a current facility or a past actor. See Angus Macbeth, *Criminal Enforcement of Resource Conservation and Recovery Act*, A.L.I.-A.B.A. COURSE OF STUDY C778, 1992 WL 491 (Oct. 29, 1992).

8. 950 F.2d 741 (D.C. Cir. 1991). It is significant to note that this decision was not rendered until ten years after the suit was first filed. See Gene A. Lucero & Robert A. Antonopolis, *Recent Developments in Hazardous Waste*, ENVTL. L. UPDATE, Sept.-Oct. 1992.

9. See *infra* notes 81-101 and accompanying text.

10. 57 Fed. Reg. 21,450 (1992). A companion rule, known as the Contained-In Rule, states that any waste (such as soil or groundwater) that contains a listed hazardous waste will be deemed a hazardous waste so long as the presence of the waste can still be detected. 40 C.F.R. § 261.3(c)(2)(i) (1991); see also 53 Fed. Reg. 31,148 (1988); *Chemical Waste Management, Inc. v. EPA*, 889 F.2d 1526 (D.C. Cir. 1989). The Contained-In Rule was not challenged in the *Shell Oil* litigation.

11. The Senate voted unanimously on September 8, 1992, to "set Oct. 1, 1993, as the earliest date by which EPA could issue a final replacement rule." *Senate Votes to Lift Sunset on Two Interim RCRA Rules*, HAZARDOUS WASTE NEWS, Sept. 15, 1992. The Bill, proposed by Senator John Chafee (R-R.I.), ranking minority member of the Senate Environment and Public Works Committee, was passed as a rider to an appropriations bill amendment and set October 1, 1994, as the deadline for EPA's issuance of the final rules. *Id.* On October 6, President Bush signed H.R. 5679 into law, which contained a provision that lifted the sunset date of April 28, 1993 and expressed that the rules "shall not be terminated or withdrawn" until revisions become effective. *Court Refuses to Summarily Reject Interim Hazardous Waste Rules*, GROUND WATER MONITOR, Nov. 17, 1992.

12. Richard Fortuna, Executive Director of the Hazardous Waste Treatment Council, claimed the White House Office of Management and Budget (OMB) "had forced EPA to impose the sunset provision so that the administration could force EPA to issue weak rules favored by the manufacturing industry." *Senate Votes to Lift Sunset on Two Interim RCRA Rules*, HAZARDOUS WASTE NEWS, Sept. 15, 1992. After publishing the Hazardous Waste Identification Rule (HWIR) on May 20, 1992, the EPA withdrew them on September 28, reportedly under pressure from the Bush Administration. *Id.* "[The] (HWIR) proposal was widely seen as political and not based on any desire to protect the environment," objectors stated. *Administration Faulted as HWIR Withdrawal Termed Political*, PESTICIDE & TOXIC CHEMICAL NEWS, Sept. 30, 1992.

resurrection of the rules, especially in light of Vice President Gore's reputation as an "environmental extremist."<sup>13</sup> It is more likely, however, that the Clinton Administration will push for a more reasonable change in the rules.<sup>14</sup> Any resurrection of the mixture and derived-from rules without a revised definition would be atrocious in light of the vast amount of work that has already been done to revise the rules.<sup>15</sup>

## II. THE MIXTURE AND DERIVED-FROM RULES DEFINED AND APPLIED

The mixture rule states that when any listed<sup>16</sup> hazardous waste is mixed with a non-hazardous solid waste, the entire mixture is presumed to be a listed hazardous waste.<sup>17</sup> For example, if a facility mixes a drum of listed F009 (spent stripping and cleaning bath solution from electroplating where cyanide are used) with a non-hazardous solid waste,<sup>18</sup> the entire mixture is considered hazardous. Neither the quantity of the listed hazardous waste nor the ratio of listed hazardous waste to non-hazardous waste is considered by the rule. If even a drop of listed hazardous waste is mixed with a drum of non-hazardous waste, the entire drum will be presumed to be a hazardous waste and must be regulated and disposed of appropriately.<sup>19</sup>

The EPA had two main purposes for implementing the mixture rule. First, the EPA wished to avoid creating a "loophole" in the law whereby facilities could rid themselves of hazardous waste and its attendant regulatory requirements through dilution.<sup>20</sup> Second, the EPA found it "too difficult to devise a workable regulatory program without the presumption of the mixture rule [because the] combinations of listed wastes and other wastes are infinite."<sup>21</sup>

13. Eleanor Clift, *Gore: Playing Second Fiddle*, NEWSWEEK, Jan. 25, 1993 at 35.

14. *EPA Withdraws RCRA Hazwaste Proposal in Pre-Election Move*, CHEMICAL WEEK, Oct. 7, 1992.

15. The EPA reported that over 600 different entities had submitted comments regarding the EPA's proposed revision, the Hazardous Waste Identification Rule. Telephone Interview with Mr. Jim Carroll, RCRA Information Specialist (Nov. 22, 1992).

16. The EPA has specified certain wastes as hazardous on a generic, nationwide basis and has made lists of those wastes. The lists are categorized based on three criteria: (1) wastes from nonspecific sources, (2) wastes from specific sources, and (3) wastes from "discarded commercial chemical products." 40 C.F.R. § 261.31-.33; see also Gaba, *infra* note 23, at 10,034. RCRA provides the EPA with specific instructions for identifying and listing hazardous wastes at 42 U.S.C. § 6921(a), (b) (1988).

17. 40 C.F.R. § 261.3(a)(iv) (1991).

18. The term "solid" includes liquids that are wastewaters.

19. Morris & Coon, *supra* note 6, at 1531.

20. 45 Fed. Reg. 33,095 (1980).

21. *Id.*

The derived-from rule<sup>22</sup> states that a solid waste that was “generated from” the treatment, storage or disposal of a hazardous waste is itself classified as a hazardous waste.<sup>23</sup> For example, if a drum filled with hazardous waste erodes and leaks, and tests show that the surrounding soil into which the hazardous waste has leaked is hazardous, then the soil is itself a solid waste that was “generated from” the disposal of hazardous waste. Thereafter, the soil would have to be treated and disposed of according to RCRA’s stringent requirements. The derived-from rule applies regardless of the concentration of hazardous constituents in the source waste.<sup>24</sup>

The main purpose for the EPA’s promulgation of the derived-from rule was that it was “too difficult to devise a waste-specific exclusion system identifying processes that would render non-hazardous wastes after treatment.”<sup>25</sup> The Agency also intended to close potentially major loopholes in the Subtitle C management system.<sup>26</sup> “[W]ithout a ‘derived-from’ rule, owners and operators of hazardous waste treatment, storage, and disposal facilities (TSDFs) could potentially evade regulation by minimally processing or managing a hazardous waste and claiming that the resulting residue was no longer the listed waste, despite the continued hazards that could be posed by the residue even though it does not exhibit a characteristic.”<sup>27</sup> In addition, the derived-from rule attempts to minimize the problem of “sham” recycling.<sup>28</sup>

#### A. *What Is a Solid Waste?*

To be regulated under RCRA the waste must first be determined to be a solid waste before it can be deemed a hazardous waste.<sup>29</sup> The mixture rule only applies if materials are being mixed after they have already

22. 40 C.F.R. § 261.3(c)(2)(i) (1991).

23. Jeffrey M. Gaba, *The Mixture and Derived-From Rules Under RCRA: Once a Hazardous Waste Always a Hazardous Waste?*, 21 *Envtl. L. Rep. (Envtl. L. Inst.)* 10,033, 10,038 (Jan. 1991).

24. *Id.*

25. 45 *Fed. Reg.* at 33,096.

26. *Id.*

27. 57 *Fed. Reg.* 7,628 (1992). The hazardous waste amendments of 1984 were successful in closing many loopholes left by RCRA. See Richard Ottinger, *Strengthening of the Resource Conservation and Recovery Act in 1984: The Original Loopholes, the Amendments, and the Political Factors Behind Their Passage*, 3 *PACE ENVTL. L. REV.* 1 (1985).

28. An example of sham recycling is the application of waste oil as a dust suppressant. See Gaba *supra* note 23, at 10,033.

29. RCRA defines solid waste as:

“Any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return

become solid wastes.<sup>30</sup> Some recycled materials are excluded from the definition of discarded material depending on the use or reuse of the recycled materials.<sup>31</sup> There are also several exclusions to the definition of solid waste, including domestic sewage, wastewater discharges, nuclear materials and agricultural runoff.<sup>32</sup> These complicated definitions and exclusions indicate that the traditional definition of the term "solid" does not apply to "solid waste." Liquid can also be "solid wastes" under these definitions.

### B. *Is the Solid Waste Hazardous or Non-Hazardous?*

Non-hazardous wastes are regulated under Subtitle D of RCRA, which is much less stringent than Subtitle C.<sup>33</sup> Solid wastes that are also hazardous wastes are regulated under RCRA's Subtitle C.<sup>34</sup> A solid waste is considered to be a hazardous waste<sup>35</sup> if it is either known to be hazardous and listed as such<sup>36</sup> or exhibits a hazardous characteristic.<sup>37</sup> The four characteristics for which a waste will be found to be hazardous are ignitability, corrosivity, reactivity and toxicity.<sup>38</sup>

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flows or industrial discharges which are point sources subject to permits . . . or source, special nuclear, or by product material . . . ."

42 U.S.C.A. § 6903(27) (1988).

30. If a waste is not a solid waste, its disposal would not be regulated by RCRA. See ZYGMUNT J. B. PLATER ET AL., ENVIRONMENTAL LAW AND POLICY: NATURE, LAW AND SOCIETY 939 (1992); see also Stephen Johnson, *Recyclable Materials and RCRA's Complicated, Conflicting, and Costly Definition of Solid Waste*, 21 Envtl. L. Rep. (Envtl. L. Inst.) 10,357 (1991); Jeffrey M. Gaba, *Solid Waste and Recycled Materials Under RCRA: Separating Chaff From Wheat*, 16 ECOLOGY L.Q. 623 (1989).

31. 40 C.F.R. § 261.2(e) (1991). There are some materials which will be deemed solid waste even if the recycling involves use, re-use, or returns to the original process: "(1) Materials used in a manner constituting disposal, or used to produce products that are applied to the land; or (ii) Materials burned for energy recovery, used to produce a fuel, or contained in fuels; or (iii) Materials accumulated speculatively; or (iv) [certain hazardous wastes used as ingredients to make a product at the site of generation]." *Id.* § 261.2(e)(2).

32. *Id.* § 261.4(a).

33. *Id.* § 257. This portion of RCRA is more lenient because it allows for waste disposal in sanitary landfills that are not required to have double-liners. PLATER ET AL., *supra* note 30, at 931.

34. RCRA §§ 3001-3020 (codified at 42 U.S.C.A. §§ 6921-6939a (1988); 40 C.F.R. § 261 (1991)).

35. RCRA defines "hazardous waste" as:

a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may —

(A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or

(B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

42 U.S.C.A. § 6903(5) (1988).

36. See *supra* note 16.

37. 40 C.F.R. § 261.3(a)(2)(i)-(iv) (1991).

38. *Id.* § 261.21-24.

C. *When Do the Mixture and Derived-From Rules Apply to Hazardous Wastes?*

RCRA states that "a solid waste . . . becomes a hazardous waste when . . . (2) in the case of a mixture of solid waste and one or more listed hazardous wastes, when the listed hazardous waste is first added to the solid waste . . . (3) in the case of any other waste (including a waste mixture), when the waste exhibits any of the characteristics [of hazardous waste]." <sup>39</sup> Therefore, the first step in determining whether a mixed waste should be regulated as a hazardous waste is to determine whether the hazardous portion of the mixture is a listed hazardous waste or a characteristically hazardous waste. A mixture of a non-hazardous solid waste and a characteristically hazardous waste is hazardous only if the resultant mixture exhibits a hazardous characteristic. For example, if a drop of characteristically hazardous waste was mixed with a drum of non-hazardous solid waste, it would not be presumed to be hazardous waste unless the resultant mixture exhibited a hazardous characteristic, which is unlikely where such a small quantity is involved. Thus, the mixture rule does not pose a problem for wastes that are characteristically hazardous where the resultant mixture is not characteristically hazardous. Mixtures involving listed hazardous wastes, however, are presumptively hazardous after mixing. <sup>40</sup> If listed hazardous wastes are mixed with solid wastes, even though the resultant mixture does not exhibit hazardous characteristics, the mixture is still classified as a hazardous waste.

As with mixtures containing characteristically hazardous wastes, solid wastes derived from a characteristically hazardous waste are also hazardous if they exhibit a hazardous characteristic. However, the derived-from rule does not apply to solid wastes which are derived from a listed hazardous waste if the solid waste does not test characteristically hazardous. This result departs from the harshness of the Mixture Rule.

### III. PROBLEMS WITH THE RULES

The EPA admits there are problems with these rules. <sup>41</sup> First, regulated parties claim the rules over-regulate <sup>42</sup> because, under the mixture

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39. *Id.* § 261.3(b)(1)-(3).

40. *Id.* § 261.3(a)(2)(iv).

41. See Gaba, *supra* note 23.

42. See PLATER ET AL., *supra* note 30.



rule, mixtures that do not test hazardous are regulated as hazardous simply because they contain a listed hazardous waste.<sup>43</sup> Since the mixture may not pose any threat to health or the environment, critics claim it is an unfair burden to require regulated parties to meet RCRA's expensive tracking and disposal requirements.<sup>44</sup>

Second, generators claim that the rules are unfair to those generators that generate listed hazardous waste, because the mixture rule applies to listed wastes whether or not the resultant mixture exhibits a hazardous characteristic. Conversely, a characteristically hazardous waste (one which is not "listed" but still exhibits characteristics of hazardousness) would not be regulated if it were mixed with a solid waste and the resultant mixture did not exhibit hazardous characteristics.

Third, regulated parties want a *de minimis* exemption for small quantity mixtures. The mixture rule does not allow even very small quantities of listed hazardous waste to be mixed with large quantities of solid waste.<sup>45</sup> Small quantity generators claim that taxpayers are paying for the EPA to regulate the disposal of large quantities of non-harmful solid wastes because they have been mixed with a small quantity of a hazardous constituent which may not be harmful in such small quantities. This is a waste of taxpayer funds when the funds could be utilized to prevent or clean up hazardous wastes which are truly harmful to the environment and human health.

Fourth, under the derived-from rule the EPA is attempting to regulate hazardous wastes that its rules have "created." In 1978 the EPA estimated that ninety percent of the hazardous wastes being generated at that time were not in accord with the requirements of RCRA.<sup>46</sup> One of the criticisms of the mixture rule and the Derived-From Rule is that the EPA has been overzealous in its application of these rules. Rather than simply bringing that ninety percent into conformity with RCRA guidelines, the EPA has gone further to "create" new hazardous wastes where there were none before.<sup>47</sup> The Agency is regulating not only truly hazardous waste, but also "new" hazardous waste that is unlikely to harm

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43. *Id.*

44. *Id.*

45. There are exceptions. See 40 C.F.R. 261.4(a), (b), 261.6(a)(3)(v)-(viii) (1991); see also PLATER ET AL., *supra* note 30, at 937 ("More than half of the nation's hazardous waste is outside of the RCRA system.").

46. 43 Fed. Reg. 58,947 (1978).

47. This is not true of the mixture rule, where a hazardous waste must have been present prior to mixture. The derived-from rule, however, works to make soil and other substances which have the "bad luck" to be located near a hazardous waste disposal site into hazardous waste when leachate from the hazardous waste disposal site seeps into the surrounding soil. Therefore, the derived-from rule "creates" new hazardous waste.

human health or the environment, the two areas RCRA was enacted to protect. Therefore, the effect of these rules is an expenditure of taxpayer funds to regulate waste that is unlikely to harm anyone or anything.

Finally, under the derived-from rule, a leachate can be "derived from" several sources, and it can be difficult to determine which source it was originally derived from. Congress "solved" this problem when it modified RCRA by The Hazardous and Solid Waste Amendments of 1984.<sup>48</sup> In the 1988 preamble, the EPA stated that where leachate was derived from several hazardous waste sources, the treatment standards for each of those sources would be applicable.<sup>49</sup> Therefore, by solving the issue of how to determine which hazardous constituent caused the leachate problem, Congress, through the EPA, has imposed further expense on facilities to treat leachate derived from several sources as if it were derived from "each" of those sources. In some instances treatment for one source could preclude the necessity for treatment for "each" source. Additionally, the expense could be astronomical where many sources are involved.

#### IV. JUDICIAL INTERPRETATION OF THE RULES

Prior to its *Shell Oil*<sup>50</sup> decision, the D.C. Circuit had looked at both the mixture rule and the derived-from rule in *Chemical Waste Management, Inc. v. EPA*<sup>51</sup> In that case the defendant challenged the derived-from rule as being unreasonable, but the court disagreed.<sup>52</sup> The court explained that "leachate is produced when liquids, such as rainwater, percolate through wastes stored in a landfill. The resulting fluid will contain suspended components drawn from the original waste."<sup>53</sup> The Court determined that leachate derived from hazardous wastes was itself a hazardous waste.<sup>54</sup> As it did two years later in *Shell Oil*, the *Chemical Waste Management* court bowed to the EPA's expertise. The Court

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48. 42 U.S.C. § 6924(g)(4) (1988). The EPA, after dividing wastes into thirds, was required under this modification to establish treatment standards for each third by May 8, 1990. See *Chemical Waste Management v. EPA*, 869 F.2d 1526, 1530 (D.C. Cir. 1989). The residues from treatment of an originally listed waste (e.g., ash, scrubber water) are also listed RCRA hazardous wastes (because of the derived-from rule), and therefore, are prohibited from land disposal unless they meet treatment standards for the waste code(s) of the original listed waste(s) from which they derive. See *Superfund LDR Guides*, A.L.I.-A.B.A. COURSE OF STUDY C506, 1990 WL 163, April 26, 1990.

49. *Id.*

50. 950 F.2d 741 (D.C. Cir. 1991).

51. 869 F.2d 1526 (D.C. Cir. 1989).

52. *Id.*

53. *Id.* at 1530.

54. *Id.*

stated that "an agency's interpretation of its own regulations will be accepted unless it is plainly wrong."<sup>55</sup> "[O]n a highly technical question . . . courts necessarily must show considerable deference to an agency's expertise."<sup>56</sup> *Chemical Waste Management* dealt with chemical wastes seeping into soil and groundwater, neither of which constitute solid waste.<sup>57</sup>

Although the Court was quick to point out that it was not ruling on the validity of the derived-from rule,<sup>58</sup> it did shed some light on its interpretation of the mixture rule:

In promulgating the mixture rule, the agency did not presume that every mixture of listed wastes and other wastes would in fact present a hazard. Rather, the agency reasoned that '[b]ecause the potential combinations of listed wastes and other wastes are infinite, we have been unable to devise any workable, broadly applicable formula which would distinguish between those waste mixtures which are and are not hazardous.' . . . The EPA therefore concluded that it was fair to shift to the individual operator the burden of establishing (through the delisting process) that its own waste mixture is not hazardous.<sup>59</sup>

## V. THE FUTURE OF THE RULES

### A. Shell Oil: *The Case That Opened the Can of Worms*

In *Shell Oil v. EPA*<sup>60</sup> the mixture and derived-from rules were challenged on both procedural and substantive grounds. Procedurally, petitioners argued that the proposed rules did not contain provisions for classifying either mixtures of listed hazardous wastes with any other solid waste or residues derived from the treatment of hazardous waste.<sup>61</sup> The final rules, however, did contain the mixture and derived-from rules.<sup>62</sup> Therefore, petitioners claimed that the EPA failed to provide adequate notice and opportunity for comment.<sup>63</sup> Substantively, petitioners argued that "the EPA exceeded its statutory authority by including the two rules

55. *Id.* at 1538-39 (citing *General Carbon Co. v. Occupational Safety and Health Review Comm'n*, 860 F.2d 479, 483 (D.C. Cir. 1988)).

56. *Id.* at 1539 (citing *MCI Cellular Telephone Co. v. FCC*, 738 F.2d 1322, 1333 (D.C. Cir. 1984)).

57. 42 U.S.C. § 6903(27) (1988).

58. *Chemical Waste Management*, 869 F.2d at 1530 n.4.

59. *Id.* at 1539-40. The delisting process mentioned by the court is a process through which the EPA affirmatively grants a petition to reclassify the material as non-hazardous. See Gaba, *supra* note 23; *infra* notes 182-83.

60. 950 F.2d 741 (D.C. Cir. 1991).

61. *Id.* at 746.

62. *Id.*

63. *Id.*

in the final definition of hazardous waste.”<sup>64</sup> The EPA claimed that it was placed under restrictive time constraints by Congress, and the time pressures had an effect on the new regulations.<sup>65</sup> “Because of limited information, the Agency was unable to avoid underregulation and overregulation.”<sup>66</sup>

The Court noted that the EPA must observe the procedural requirements of the Administrative Procedures Act.<sup>67</sup> The degree of deviation between the proposed regulation and the final rule determines the adequacy of notice.<sup>68</sup> As long as a rule is a “logical outgrowth” of the proposed regulation, it will not be invalidated.<sup>69</sup> However, a sharp deviation will likely mean the parties have not had adequate notice and opportunity for comment.<sup>70</sup> The Court also noted that Congressional intent binds the EPA’s regulatory discretion.<sup>71</sup> If the intent is ambiguous, the EPA has reasonable deference in defining the rules.<sup>72</sup>

With regard to the mixture rule, the EPA admitted that, although it had intended to treat waste mixtures as hazardous, it did not include this intention in the proposed rules.<sup>73</sup> The EPA argued that inclusion of the mixture rule in the final regulations was necessary for clarification due to questions that had been raised during the comment period and to close “a major loophole in the Subtitle C management system.”<sup>74</sup> The EPA contended that because the industry could not have reasonably assumed that it could avoid the RCRA requirements for listed hazardous waste simply by mixing it with a nonhazardous waste, the industry was put on notice that the mixture rule would be included in the final regulation.<sup>75</sup>

The EPA’s arguments with regard to the derived-from rule were similar. The Agency admitted that the proposed regulations did not include the derived-from rule,<sup>76</sup> but argued that it was necessary for clarification and “as a logical outgrowth of . . . [the definition of solid waste].”<sup>77</sup> The EPA also contended that inclusion of the derived-from

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64. *Id.*

65. *Id.*

66. *Id.*

67. 42 U.S.C. § 6976 (1988) (citing 5 U.S.C. §§ 701-706).

68. *Shell Oil*, 950 F.2d at 747.

69. *Id.*

70. *Id.*

71. *Id.*

72. *Id.*

73. *Id.* at 749.

74. *Id.* (citing 45 Fed. Reg. 33,095 (1980)).

75. *Id.* at 749-750.

76. *Id.* at 750.

77. *Id.* (citing 45 Fed. Reg. 33,096 (1980)).

rule in the final regulations, like the mixture rule, was foreseeable and therefore proper.<sup>78</sup>

The Court found the EPA's arguments of implied notice and foreseeability unimpressive.<sup>79</sup> "[A]n unexpressed intention cannot convert a final rule into a 'logical outgrowth' that the public should have anticipated."<sup>80</sup> In finding that the public did not have adequate notice or opportunity for comment, the court stated "the mixture and derived-from rules exceed the limits of a 'logical outgrowth.'"<sup>81</sup> Because the Court vacated the rules on procedural grounds, it did not "reach petitioner's argument that the mixture and derived-from rules unlawfully expand the EPA's jurisdiction under Subtitle C of RCRA."<sup>82</sup>

### B. *Current Status of the Rules*

The D.C. Circuit denied EPA's Petition for Rehearing on February 12, 1992.<sup>83</sup> In an accompanying Motion for Clarification the EPA asked whether the December 6 invalidation was retroactive.<sup>84</sup> That motion was denied without the benefit of an opinion on March 3, 1992.<sup>85</sup> Therefore, the question of the retroactivity of the D.C. Circuit's invalidation of the rules remained unanswered.

On June 4, 1992, the Eighth Circuit Court of Appeals in *United States v. Goodner Brothers Aircraft, Inc.*<sup>86</sup> determined that *Shell Oil* was intended to be retroactive when it reversed a conviction under RCRA.<sup>87</sup> In an unrelated action, an administrative law judge relied on *Goodner* in holding that *Shell Oil* applied retroactively, requiring dismissal of the case.<sup>88</sup> The EPA is pursuing an administrative appeal of that action.<sup>89</sup>

78. *Id.* at 750.

79. *Id.*

80. *Id.* at 751 (citing *Small Refiner Lead Phase-Down Task Force v. EPA*, 705 F.2d 506, 548-49 (D.C. Cir. 1983)).

81. *Id.*

82. *Id.* at 752.

83. Telephone Interview with EPA personnel (Feb. 12, 1992).

84. *Id.*

85. Telephone Interview with EPA personnel (Mar. 16, 1992).

86. 966 F.2d 380 (8th Cir. 1992).

87. *United States v. Goodner Bros. Aircraft, Inc.*, 966 F.2d 380 (8th Cir. 1992). The Court determined that the D.C. Circuit had intended the word "vacate" to mean that the invalidation was retroactive since, in a previous case, the D.C. Circuit had defined the term "vacate" to mean "to annul; to cancel or rescind; to declare, to make, or to render, void; to defeat; to deprive of force; to make of no authority or validity; to set aside." *Id.* at 384 (citing *Action on Smoking & Health v. C.A.B.*, 713 F.2d 795, 797 (D.C. Cir. 1983)). The court did, however, affirm the conviction under CERCLA. *Id.* at 385.

88. Stephen C. Jones, *Shell Oil Case May Tie Enforcers' Hands*, NAT'L L.J., October 19, 1992, at 18.

89. *Id.*

The *Shell Oil* decision has caused substantial problems for many state EPA programs. Some states, rather than writing their own rules to define and regulate hazardous waste, had adopted the mixture and derived-from rules "by reference."<sup>90</sup> This means that the enforceability of many state mixture and derived-from rules is in jeopardy.<sup>91</sup> Oklahoma is the first state to litigate the issue and was dealt a preliminary blow in *Equidae Partners v. Oklahoma State Dept. of Health*.<sup>92</sup> On January 16, 1993, the Washington County District Court granted summary judgment<sup>93</sup> in favor of Equidae on the ground that *Shell Oil* invalidated the Oklahoma derived-from rule. The OSDOH has appealed to the Oklahoma Supreme Court.<sup>94</sup>

On March 3, 1992, the EPA issued a Notice of Proposed Rulemaking, asking for public comment on the rules.<sup>95</sup> Also on March 3, 1992, the EPA issued an interim final rule which continued the mixture rule and the derived-from rule in full force and effect until April 28, 1993, at which time the EPA intended to issue revised rules.<sup>96</sup>

On May 20, 1992, the EPA issued the Hazardous Waste Identification Rule (HWIR) as a proposed replacement for the mixture and derived-from rules.<sup>97</sup> The HWIR "fundamentally changes the identification of hazardous waste and the delisting procedure."<sup>98</sup> Due to increasing public concern that the EPA would not have enough time to properly analyze all aspects of any revised rules, President Bush signed an appropriations bill on October 6, 1992.<sup>99</sup> House Bill 5679 lifted the sunset provision previously set for April 28, 1993 and extended the deadline indefinitely, or until the EPA has revised the rules.<sup>100</sup> On October 26, 1992, the EPA withdrew the proposed HWIR, citing the large number of comments made by interested parties regarding "a broad range of policy and technical issues which the Agency believes must be addressed."<sup>101</sup>

The EPA is striving to meet the public's demand to be heard. The

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90. *Id.*

91. *Id.*

92. No. C-91-532 (Wash. County Dist. Ct. Okla. 1992); see Jones, *supra* note 88.

93. The Washington County District Court issued a Minute Order granting summary judgment and did not issue a formal opinion. Telephone Interview with Washington County Court Clerk (Jan. 17, 1993).

94. *Equidae Partners v. Oklahoma State Dept. of Health*, No. 79,124 (Okla. Sup. Ct. 1992).

95. *Id.*

96. *Id.*

97. 57 Fed. Reg. 21,450 (1992).

98. Gene A. Lucero & Robert A. Antonoplis, *Recent Developments in Hazardous Waste*, ENVTL. L. UPDATE, Sept.-Oct. 1992.

99. H.R. 5679, 102d Cong., 2d Sess. (1992).

100. *Id.*; see *supra* note 11.

101. 57 Fed. Reg. 49,280 (1992).

EPA held several public meetings on the proposed HWIR during June and July, 1992.<sup>102</sup> On January 5, 1993, the EPA held a public meeting to "solicit input from the public on appropriate procedures and standards to identify hazardous waste and contaminated media."<sup>103</sup> Most recently, the EPA has scheduled public meetings on April 28 and May 18 and 19 to develop options to revise the regulatory definition of solid waste and to address the hazardous waste identification project.<sup>104</sup>

### C. *The Hazardous Waste Identification Rule (HWIR)*

The EPA issued proposed rules, the HWIR, on May 20, 1992, which were intended to replace the mixture and derived-from rules.<sup>105</sup> The HWIR includes two approaches: Concentration-Based Exemption Criteria (CBEC) and Expanded Characteristics Option (ECHO).<sup>106</sup> The adoption of either approach would significantly limit the number of constituents which would be subjected to Subtitle C regulation. The Agency stated that it "endeavored to develop exemption requirements which have a practical impact and make the exemptions available to all generators managing listed waste and contaminated media meeting the exemption levels proposed."<sup>107</sup>

#### 1. Concentration-Based Exemption Criteria (CBEC)

The first approach would set concentration levels below which regulated parties would be allowed to mix contaminated media and some listed hazardous wastes with nonhazardous wastes.<sup>108</sup> This approach would also apply to derivatives and media (including soils and groundwater).<sup>109</sup> CBEC would provide for generator self-delisting<sup>110</sup> and would, therefore, replace the current delisting process, allowing contaminated wastes to exit the RCRA Subtitle C management system.<sup>111</sup> CBEC would, however, retain the current system of characteristic and

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102. *Id.* at 24,004, 28,156-58.

103. *Id.* at 61,376.

104. Telephone Interview with EPA personnel (April 8, 1993). For more information, call the RCRA Hotline at 1-800-424-9346.

105. 57 Fed. Reg. 21,450 (1992).

106. *Id.*

107. *Id.*

108. *Id.*; see also Lucero & Antonoplis, *supra* note 98.

109. 57 Fed. Reg. 21,450 (1992).

110. *Id.* Generators would have to (1) test their wastes, and (2) submit annual notification and certification to the Agency (providing information about the waste generation process and waste management practices) for the first two years and every three years thereafter. "No Agency review of sampling plans or waste analysis data, or prior Agency approach would be required before wastes or media could be managed as non-hazardous." *Id.*

111. Lucero & Antonoplis, *supra* note 98.

listed wastes.<sup>112</sup>

In order to establish the 200 risk-based concentration levels under CBEC, the EPA is considering three different standards: (1) health-based standards; (2) health-based standards that would be increased by chemical-specific multipliers; or (3) technology-based standards.<sup>113</sup> The EPA is also considering allowing higher concentration levels for those facilities that dispose of waste in a landfill that meets certain design criteria.<sup>114</sup> More lenient exemption levels are also being considered for contaminated soils, but the EPA is drawing the line at dilution.<sup>115</sup> Under the HWIR, the EPA would exempt certain constituents from CBEC that it believes are adequately managed under the current RCRA regulations or lack specific analytical methods for determining health-based concentration levels.<sup>116</sup>

## 2. Expanded Characteristics Option (ECHO)

As its name implies, the second approach would expand the current toxicity characteristics to include all toxic constituents for which health-based information and analytical methods currently exist.<sup>117</sup> In expanding the Toxicity Characteristics (TC), the current TC Rule would be revised to include as many additional listed constituents as possible.<sup>118</sup> However, this approach would be a means of both entering<sup>119</sup> and exiting<sup>120</sup> the Subtitle C system because it would expand the number of constituents listed in the Toxicity Characteristics (TC) rule.<sup>121</sup> Under

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112. *Id.*

113. *Id.* The EPA does not favor the technology-based standards because Best Demonstrated Available Technology (BDAT) land disposal restriction levels are not risk-based. *Id.*

114. *Id.* The more lenient CBEC levels proposal is referred to as the "contingent management" proposal because it is based on the point of disposal management of the wastes. *Id.*

115. 57 Fed. Reg. 21,485 (1992); see Lucero & Antonoplis, *supra* note 98.

116. Lucero & Antonoplis, *supra* note 98.

117. *Id.*

118. 57 Fed. Reg. 21,450 (1992).

119. Because toxicity characteristics will be greatly expanded, it is likely that new hazardous wastes, previously unregulated under RCRA, will enter the Subtitle C system. As with any entry into the Subtitle C system, new generators will be required to obtain EPA generator identification numbers and submit RCRA 3010 notifications. See Lucero & Antonoplis, *supra* note 98.

120. ECHO would also replace the current delisting procedure as a means of exiting the system since the generator would only have to "demonstrate that its waste is no longer characteristically hazardous in order to have it exempt from RCRA Subtitle C regulation." See Lucero & Antonoplis, *supra* note 98.

121. *Id.* The TC Rule "provides that a waste is hazardous if an extract of the waste contains certain designated metals or toxic organic constituents above a defined threshold level." See Gaba, *supra* note 23 at 10,034. Meeting the TC Rule means that the fourth characteristic for hazardousness has been met. See *supra* note 34 and accompanying text. The current toxicity characteristics are contained in 40 C.F.R. § 261.24 (1991). "Approximately 163 Appendix VIII constituents would be added to the current 39 constituents currently subject to the TC." See Lucero & Antonoplis, *supra* note 98.



ECHO, generators would have even more autonomy than under CBEC, since they would only be required to provide the EPA (or the authorized state) with a one-time notice for wastes exiting the Subtitle C system.<sup>122</sup> Further, generators would even be allowed to “rely on their knowledge of the waste to determine if their waste exhibited a characteristic.”<sup>123</sup>

### 3. EPA’s Position With Regard to the HWIR

EPA insiders apparently favor the CBEC approach because it is simpler and easier to implement.<sup>124</sup> However, the EPA officially indicated a preference for the ECHO approach in its proposed rule.<sup>125</sup> Three advantages were proffered for this preference.<sup>126</sup> First, the EPA and the industry would realize significant cost savings due to the millions of tons of low-risk wastes that would exit the system.<sup>127</sup> Second, the EPA would realize cost savings from the limited investigation necessary under ECHO and that savings could be diverted to enforcement of generator testing requirements.<sup>128</sup> Third, ECHO would provide a strong incentive to generators to develop information about their wastes in order to avoid testing for large numbers of constituents.<sup>129</sup>

### D. *Comments Concerning the HWIR*

As of July 24, 1992, the last date on which the EPA would accept comments, over 600 comments, most in opposition, were received regarding the HWIR.<sup>130</sup> Commentators include citizen groups, regulated parties, the states and other interested parties.<sup>131</sup>

#### 1. Citizen Groups

Not surprisingly, citizens groups strongly oppose the HWIR because it “would not protect the environment.”<sup>132</sup> The Sierra Club opposes both ECHO and CBEC because both would “annihilate the land ban program, ruin precious groundwater resources, and would be nearly

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122. *Id.*

123. *Id.* This would alleviate the generator from having to test for all of the 200-plus ECHO constituents. See Lucero & Antonoplis, *supra* note 98.

124. Lucero & Antonoplis, *supra* note 98.

125. 57 Fed. Reg. 21,458-60 (1992).

126. *Id.*; see also Lucero & Antonoplis, *supra* note 98.

127. See Lucero & Antonoplis, *supra* note 98.

128. *Id.*

129. *Id.*

130. Telephone Interview with Mr. Jim Carroll, RCRA Information Specialist (Nov. 22, 1992).

131. *Id.*

132. Letter from Daniel J. Weiss, Washington Director of the Environmental Quality Program for the Sierra Club, to the EPA (July 24, 1992).

impossible to enforce.”<sup>133</sup> The Sierra Club proposes six changes to the HWIR proposal:<sup>134</sup>

a) *Lower the excessively high exemption threshold.*<sup>135</sup> The Sierra Club cites frightening statistics, including that the “ostensibly ‘low risk’ wastes would contaminate 13,000 people’s private drinking wells, ruin 15% of all wells at risk, and create over 1,800 new contaminated sites.”<sup>136</sup> In addition, no notice would be given to the many people at risk of exposure.<sup>137</sup>

b) *Consider multiple pathways of exposure to hazardous waste.*<sup>138</sup> The Sierra Club charges that the HWIR ignores hazardous waste risks other than groundwater contamination.<sup>139</sup> It urges the EPA to maintain the strong delisting procedure already in place.<sup>140</sup>

c) *Use Best Demonstrated Available Technology (BDAT), not “risk assessment.”*<sup>141</sup> The Sierra Club asserts that the maximum contaminant levels (MCLs) proposed for the delisting regulation leave a “gaping loop-hole by allowing administrators to figure economic feasibility into the equation.”<sup>142</sup> The Sierra Club fears that if the administrator is allowed to consider cost-effectiveness, the result would be MCLs that are “orders of magnitude less stringent than health concerns would otherwise dictate.”<sup>143</sup>

d) *Strike the generator honor system.*<sup>144</sup> The Sierra Club claims that the industry was on an honor system much like the proposed system prior to enactment of RCRA in 1976. Under that honor system “1,200 hazardous waste sites clogging the National Priorities List have resulted from trusting industry with such great responsibility.”<sup>145</sup>

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133. *Id.* at 1.

134. *Id.* at 2-5. The Sierra Club’s first proposed change was to eliminate the “sunset” provision. That provision was extended by Congress until October 1993. *See supra* note 11 and accompanying text.

135. Letter from Daniel J. Weiss, Washington Director of the Environmental Quality Program for the Sierra Club, to the EPA (July 24, 1992).

136. *Id.*

137. *Id.* at 2-3.

138. *Id.* at 3.

139. *Id.*

140. *Id.*

141. *Id.* at 4.

142. *Id.*

143. *Id.*

144. *Id.*

145. *Id.* The National Priorities List is a list of Superfund sites that pose the greatest danger to human health or the environment and are, therefore, of the highest priority in the nation for future cleanup. CERCLA § 105(a)(8)(B), 42 U.S.C. § 9605(a)(8)(B) (1988).

e) *Institute procedural safeguards and public accountability provisions.*<sup>146</sup> The Sierra Club proposes stringent testing requirements to replace the honor system.<sup>147</sup>

f) *Institute exemption fees.*<sup>148</sup> The Sierra Club proposes that the EPA "invoke the 'polluter pay' principle," whereby each polluter or company submitting an exemption demonstration would be required to pay a fee to the state or EPA Administrator.<sup>149</sup> The fee would be used to cover administrative overhead and compliance.<sup>150</sup>

In sum, citizens groups are not willing to accept either of the approaches proposed by the EPA because they feel that neither adequately protects human health and the environment.

## 2. Regulated Parties

The HWIR has been both supported and criticized by the parties regulated under RCRA. Opposition to ECHO centers around the fact that "adequate information about and assessment of its merits simply is not available to warrant support at this time."<sup>151</sup> The National Aeronautics and Space Administration (NASA) cited the "significant additional sampling and analysis burden," the "radical . . . departure from the existing system [that would preclude implementation] . . . in the time frames the EPA wants to finalize these changes."<sup>152</sup> Some parties support ECHO "because of the ease of interpretation and consistency in implementation of a concentration based threshold which is established for each constituent."<sup>153</sup> However, even supporters of ECHO oppose the "continued use of the Mixture and Derived-From Rules for wastestreams that contain constituents which do not have established threshold concentrations."<sup>154</sup> Hughes Aircraft urged the EPA to set interim thresholds based on current hazardous properties data and revise those thresholds as new data becomes available.<sup>155</sup>

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146. Weiss, *supra* note 131, at 5.

147. *Id.*

148. *Id.*

149. *Id.*

150. *Id.*

151. Letter from J.C. Stauter, Vice President, Environmental Services, Kerr-McGee Corporation, to the EPA (July 24, 1992).

152. Letter from Billie J. McGarvey, Director, Facilities Engineering Division, National Aeronautics and Space Administration (NASA), to the EPA (July 24, 1992).

153. Letter from E.P. Clifford, Project Manager, Corporate Safety, Health and Environmental Affairs, Hughes Aircraft Company, to U.S. EPA (July 17, 1992).

154. *Id.*

155. *Id.*

The CBEC approach has received some support.<sup>156</sup> Generators prefer the proposed health-based standards of CBEC because they are more lenient than the technology-based standard.<sup>157</sup> Chrysler Corporation, however, urged the EPA to adopt an alternative approach which would eliminate the listing scheme and manage hazardous constituents based solely on their hazardous characteristics.<sup>158</sup> Chrysler says that “in the long term, a hazardous waste classification system based on characterization (rather than listing) represents the only means of eliminating the anomalies that have arisen under the present waste management system.”<sup>159</sup>

NASA, although it expressed a preference for CBEC over ECHO, noted that zinc was proposed to be added to the list of hazardous constituents.<sup>160</sup> NASA strongly opposes the addition of zinc to this list due to zinc’s importance as a corrosion inhibitor for steel structures, its natural occurrence in the environment, its use as a dietary supplement and its presence in protective skin products.<sup>161</sup>

### 3. The States’ Positions

The obligations imposed by RCRA are only the minimum obligations that must be met.<sup>162</sup> The states may impose more stringent standards.<sup>163</sup> The EPA believes that “the States are the preferred level of government for implementation of this program.”<sup>164</sup> Because ECHO is more stringent than any existing state program, in that it would bring new wastes into RCRA Subtitle C jurisdiction due to expanded toxicity constituent levels, the states would all be required to adopt ECHO, if it were implemented.<sup>165</sup> However, if CBEC is implemented, states would

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156. Letter from G.E. Allardyce, Manager, Environmental and Energy Regulatory Planning, Chrysler Corporation, to the EPA (July 17, 1992); see Stauter, *supra* note 145.

157. See Stauter, *supra* note 150.

158. See Allardyce, *supra* note 155.

159. *Id.*

160. See McGarvey, *supra* note 151. The proposed list of hazardous constituents is referred to by the EPA as “Appendix XIII.” *Id.*

161. *Id.* at 2.

162. See Morriss & Coon, *supra* note 6; see also EPA, *The Nation’s Hazardous Waste Management Program at a Crossroads: The RCRA Implementation Study* 21 (July 1990).

163. *Id.* As of 1990, all but six states had taken control of the “base program” and, of those forty-four, six states had taken control of the corrective action program as well. *Id.*; see also PLATER ET AL., *supra* note 30, at 327.

164. 43 Fed. Reg. 58,947 (1978).

165. See Lucero & Antonoplis, *supra* note 98.

not be required to adopt it because CBEC is less stringent than the existing RCRA program.<sup>166</sup> Under CBEC, States could retain their current programs, many of which include the mixture and derived-from rules verbatim or by reference.<sup>167</sup> Even more alarming is the real possibility "that many states would choose not to adopt and implement this rule and instead substitute their own different or more stringent approaches. This would lead to a patchwork quilt of regulations nationwide. . . ."<sup>168</sup>

Not surprisingly, the Association of State and Territorial Solid Waste Management Officials (ASTSWMO)<sup>169</sup> has soundly rejected the HWIR.<sup>170</sup> ASTSWMO found ECHO to be "*fatally flawed* because it does not consider human health or ecological risks, and would be extremely difficult for State regulatory agencies to implement and enforce."<sup>171</sup> Specifically, ASTSWMO cited six problems with the HWIR. First, and apparently most important to ASTSWMO, was the fact that "374 million tons of hazardous wastes would be diverted to municipal landfills, incinerators, publicly-owned wastewater treatment works, and other facilities unprepared to deal with the volumes of toxicity of the deregulated hazardous wastes."<sup>172</sup> Second, ASTSWMO opposes the HWIR because it counters state and federal ground water protection programs.<sup>173</sup> In addition, "15% of all domestic drinking water wells surrounding Subtitle D landfills will become contaminated as a result of the rule's promulgation."<sup>174</sup> Third, the use of maximum contaminant levels (MCLs) for safe drinking water standards allows a regulated party to exit Subtitle C based on one exposure level, ingestion of drinking water, but ignores other potential health risks.<sup>175</sup> ASTSWMO feels that the MCLs "would have no bearing on assessment of risk for other exposure pathways" and therefore, ecological risks were not factored into the risk analysis.<sup>176</sup> Fourth, like citizen groups, ASTSWMO opposes a self-implementing feature which "may result in the unchecked mishandling

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166. *Id.*

167. *Id.*

168. Letter from Mark S. Coleman, Deputy Commissioner for Environmental Health Services (ASTSWMO), to the EPA (July 17, 1992).

169. ASTSWMO set up a definition of "waste task force," which is comprised of solid and hazardous waste experts from across the country.

170. *See* Coleman, *supra* note 167.

171. *Id.* (emphasis in original).

172. Letter from Patrick Matuseski and Phillip Retallick, Task Force Co-Chairs, Association of State and Territorial Solid Waste Management Officials, to U.S. EPA (July 17, 1992).

173. *Id.*

174. *Id.*

175. *Id.*

176. *Id.*

of hazardous wastes.”<sup>177</sup> Fifth, ASTSWMO opposes the HWIR because it only focuses on the redefinition of existing wastes rather than on toxics reduction.<sup>178</sup> This focus removes the incentive to develop innovative technologies. Finally, ASTSWMO is concerned with the impact that implementation of the HWIR would have on other environmental programs such as air, surface, and groundwater programs.<sup>179</sup> Those programs are currently operating under severe resource constraints and ASTSWMO is concerned that the HWIR would drain those limited resources.

#### E. *Suggested Changes*

##### 1. Allow Regulated Parties to Choose Between Health-Based and Technology-Based Standards

Although the EPA did not define a health-based or technology-based standard in the HWIR, it is logical to assume that the same or similar standards applied under other environmental laws were intended. The difference between setting a standard at the level at which harm to human health is eliminated and at a level which has been rendered possible by technology is that the two levels may be very far apart. For instance, if the EPA sets a health-based standard, the regulated parties may not have the technology available to meet that level at the current time. Another problem is that, although the health-based standard may be attainable at the present time, there may still be environmental damage that the health-based standard does not address. Health-based standards are economically efficient, however, because they do not require polluters to control pollution above that level necessary to avoid harm.<sup>180</sup>

On the other hand, if the EPA sets a technology-based standard, which is set at the best demonstrated available technology, then regulated parties are unlikely to expend the funds necessary to improve technology because their costs would increase. Technology-based standards are relatively easy to administer because identical requirements are placed on every polluter.<sup>181</sup> Technology-based standards are economically inefficient, however, because they require polluters to install expensive pollution control technology which may not be necessary to avoid harm.<sup>182</sup>

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177. *Id.*

178. *Id.*

179. *Id.*

180. See PLATER ET AL., *supra* note 30.

181. *Id.*

182. *Id.*

The EPA could set two levels from which parties could choose. By definition, the health-based standard would be set at that level where harm to human health is eliminated. This does not mean simply setting the health-based standard at an MCL for safe drinking water, as the HWIR would do, but setting standards for a number of the highest risks and exposure levels. The technology-based standard should be set above that level, either at the best demonstrated available technology or beyond. Critics would argue that regulated parties will only do the minimum necessary to meet RCRA's requirements. But the government could create incentives such as tax breaks or tax exemptions for the cost of technological equipment. Some companies may already have the higher technology, and others might institute it simply to promote themselves as ultra-environmentally conscious. The negative side of this scheme is that the EPA would face higher administrative costs because testing would be onerous and sanctions would have to be established based on two levels rather than one. Such problems may not occur with the setting of only one level.

## 2. Institute a Separate Delisting Procedure for Mixtures

The EPA has always justified its stance with regard to the mixture and derived-from rules by pointing to the generator's option to delist the hazardous waste.<sup>183</sup> However, the current delisting procedure is very difficult because the EPA considers every possible ramification under a "worst case scenario" scrutiny.<sup>184</sup> In addition, once a listed waste is delisted, the effect of the delisting is very limited. For example, Black and Decker Corporation was granted a final exclusion for metal hydroxide filter cake resulting from the treatment of wastewaters originating from

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183. 45 Fed. Reg. 33,095 (1980). To delist a hazardous waste, it must be shown that the substance does not exhibit any hazardous characteristic and that the substance does not meet any of the criteria for which the waste was originally listed. 40 C.F.R. § 260.20 (1991). Beyond this, the substance must be shown to be incapable of posing a substantial threat to health or the environment. *Id.*

184. Factors that the EPA considers in determining whether to grant the delisting petition are:

1. the nature of the constituent toxicity,
2. the constituent concentration,
3. the persistence of the constituent,
4. the degradation pattern of the constituent,
5. the degree to which the constituent bioaccumulates in ecosystems,
6. the types of improper management the constituent bioaccumulates in ecosystems,
7. the types of improper management which could occur,
8. the amounts of the waste on a regional and national basis,
9. the nature and severity of human health and environmental problems which could occur or have occurred due to exposure to the constituent, and
10. the actions taken by other governmental agencies based on the hazards posed by the constituent.

50 Fed. Reg. 28,742 (1985); see also Morriss & Coon, *supra* note 6, at 1531 n.14.

its electroplating operations, presently listed as EPA Hazardous Waste No. F006.<sup>185</sup> This exclusion only applies to those wastes generated at its Shelton, Connecticut plant and then only if the manufacturing or treatment processes remain unaltered such that there is no adverse change in waste composition or increase in waste volume.<sup>186</sup>

In its CBEC approach, the EPA, in essence, proposed a separate delisting procedure for mixtures. This approach would cause problems because it gives the regulated party nearly unlimited autonomy. In its comments to the EPA regarding the HWIR, the Hazardous Waste Treatment Council (HWTC) proposed a streamlined delisting program.<sup>187</sup> The HWTC proposed expediting the delisting process by: (1) delegating delisting authorization to the states to increase the number of resources available for review; (2) specifying the exact procedures, parameters and target levels required to meet delisting standards; and (3) establishing a known end-date to the process by setting up a delisting procedure analogous to the Class 2 permit modification regulation.<sup>188</sup> Streamlining the delisting process in this way would not only lift the burden of authorization from the EPA's shoulders, but might also serve to shift funds to generator policing, a common concern among all commentators.

### 3. Shift the Burden of Proof

Under the original mixture and derived-from rules, "the person who manages the wastes has the burden of proving that they are no longer hazardous."<sup>189</sup> If a separate delisting procedure were instituted for mixtures, this burden could be shifted to the EPA to prove that the waste remains hazardous to human health and the environment. A shifting of evidentiary burden would, however, also shift the economic burden to an Agency that is already suffering from staff shortages and budget cuts.<sup>190</sup>

### 4. Require All States to Implement the New Procedure So That Uniformity Would Result

As discussed above, since the states are not required to implement programs that are less stringent than their existing program, any new program must require state implementation. In order to correct the

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185. 57 Fed. Reg. 57,673 (1992).

186. *Id.* at 57,674.

187. Letter from Hazardous Waste Treatment Council to the EPA (July 24, 1992).

188. *Id.* at 138.

189. 57 Fed. Reg. 7,628 (1992).

190. James M. Strock, *EPA After 20 Years*, TRIAL, Aug. 1990 at 22.



problems with the mixture and derived-from rules and make the procedures more equitable for all regulated parties, any new program must be uniformly applied. In order to make state implementation mandatory, however, Congressional action may be necessary.

## VI. CONCLUSION

The mixture and derived-from rules were created to close loopholes in RCRA whereby regulated parties were able to avoid the requirements of RCRA by disposing of hazardous waste through dilution. While the EPA recognizes that the rules cause inequities, it has claimed to be unable to rectify those inequities. In the case of the mixture rule, the EPA found it "too difficult to devise a workable regulatory program without the presumption of the mixture rule" because the "combinations of listed wastes and other wastes are infinite."<sup>191</sup> With regard to the derived-from rule, it was "too difficult to devise a waste-specific exclusion system identifying processes that would render non-hazardous wastes after treatment."<sup>192</sup> The inequities in these rules have caused substantial problems for regulated parties.

The D.C. Circuit refused to mandate that the EPA correct the inequities. In vacating the rules on procedural grounds, the court followed a well-worn path of deferment to agency expertise. Although the Court did not reach the question of the substantive validity of the rules, we are left with a sense that, if the EPA does not equitably modify the rules in the near future, a substantive challenge could be successful. The future of the rules hinges on whether the EPA can now, more than a decade after their creation, rectify the inequities it found "too difficult" to address when the rules were written.

*Julianne Platz Hand*

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191. *See supra* note 20.

192. *See supra* note 25.